

from Sarawak, which he compares with the Javan *H. aurantiaca*, Wat. He has overlooked *H. aurata*, Wat., from Sarawak, the type of which is a female, whereas his form is the male of the same species, differing from the female by opaque red scales replacing the glistening golden scales of the female upon the front of the pronotum, the sides of the elytra and the legs.

EXPLANATION OF PLATE I.

Fig. 1. Rhizotrogus pallens, male and female.

Fig. 2. Rhizotrogus rufus, male and female.

Fig. 3. Empecta disparilis, male and female.

Fig. 4. Rhizotrogus gravis, male and female.

The male of each on the left. All natural size.

IV.—*On a small Collection of Mammals from Lumbo, Mozambique.* By OLDFIELD THOMAS.

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THANKS to the generosity of Lord Swaythling, the British Museum has been enabled to acquire a small collection of mammals obtained during the recent East-African campaign by Mr. Arthur Loveridge at Lumbo—a place on the mainland opposite the island of Mozambique, in Portuguese East Africa.

This region has been exceedingly little worked, and, apart from the specimens collected by Peters at Cabaceira, and mentioned in his work on Mozambique, and a few brought home by Dr. Kirk, almost no mammals from it have come into the hands of zoologists.

As a consequence, I have thought it worth while to give a list of the species obtained by Mr. Loveridge.

1. *Crocidura hirta*, Peters.

♀. 236.

This shrew is in changing pelage, and gives a striking example of the peculiar colour-changes described in Mr. Dollman's Monograph* as occurring in the species.

* Ann. & Mag. Nat. Hist. (8) xvi. p. 71 (1915).

2. *Petrodromus (Mesoctenus) rovumæ*, Thos.

♂. 206, 207, 208, 214, 220; ♀. 209, 210, 211, 212, 215, 216, 219, 221, 222, 223, 224, 225, 226.

This fine series of a species hitherto very insufficiently represented is of particular importance, as some doubt appeared possible in regard to the relation of the thickened tail-bristles to the age of the individual—a point on which its distinction as representing a special subgenus mainly depended. For it might have proved that in old age the bristles of this species became as knobby as they are in the subgenus *Cercoctenus*. Now, however, I am able to record that not in the oldest specimens do the bristles become like those of *P. sultan*, the type of *Cercoctenus*, while, on the other hand, every individual that has its permanent teeth in place has some thickened bristles present, none occurring in true restricted *Petrodromus*. Certainly the bristles do increase in number and knobiness with age, but they never equal those of *Cercoctenus*. The bristles of the males also seem to become in old age more knobby than those of the females.

The palatal vacuities are in most cases of considerable size, but in some individuals are almost completely absent, so that there is no absolute constancy in the character, although it has undoubtedly a certain average value.

It was largely on this character that I separated *mossambicus* of Cabaceira from *rovumæ* of the Rovuma River; but it now appears that the character is not to be trusted when only individual specimens are available.

As to the other character of *mossambicus* (the slaty grey on the belly-hairs) there is in this series a most surprising and abnormal range of variation—from none at all to cases where each hair is broadly slaty at base. In consequence, I think that the name *mossambicus* should be withdrawn and all of these southern forms of *Mesoctenus* should be referred to *rovumæ*. It is, of course, still possible that a subspecific difference in colour may prove to exist when good Rovuma skins are available, but for the present the name *rovumæ* should be used for all.

3. *Mungos mossambicus*, Matsch.

♂. 204, 235; ♀. 205.

Practically topotypes, the name having been based on a specimen obtained by Peters at Cabaceira.

4. *Helogale ivori*, sp. n.

♂. 227, 228; ♀. 200, 229, 233, 234.

A buffy species, resembling *H. victorina* in colour, but *H. brunnula* in its comparatively small size.

Size small, skull not or barely reaching 50 mm. in length. General colour very uniform buffy—that is to say, the body is so buffy that the limbs and tail are less contrasted with it than usual. Back nearest to “cinnamon-buff,” the usual fine brown and whitish ticking of the hairs modifying it less than in other species. Under surface strong ochraceous tawny. Muzzle and cheeks more tawny. Crown slightly greyer and rump a little more ochraceous than back, but these contrasts are very markedly less conspicuous than in the Mweru *H. varia*. Limbs ochraceous tawny. Tail rather shorter than in other species, grizzled buffy above, strong ochraceous-tawny below.

Skull small, about as in *H. brunnula*, markedly smaller than in the Central and East-African forms *victorina*, *rufula*, &c.

Dimensions of male and female (the first the type):—

Head and body 242, 210 mm.; tail 145, 140; hind foot 43, 40; ear 20, 20.

Skull: median length 49·8, 49·3; condylo-basal length 49·3, 49·2; zygomatic breadth 28·3, 27·2; interorbital breadth 10·3, 9·8; palatal length 24·2, 24·3; maxillary tooth-row 17·2, 17.

Type. Adult male. Original number 228. Killed 22nd October, 1918.

This species is conspicuously more buffy and less rufous than Peters's *H. undulata*, which was described from Mosimboa, some distance further northward. It has a superficial resemblance to the Uganda form *H. victorina*, but is smaller, more uniform in colour, and the tail is decidedly shorter. The Mweru species *H. varia*, which seems to have as short a tail, is larger, and has an unusually dark grey crown and more strongly buffy rump, both contrasting with the dorsal colour more than in *H. ivori*.

Named after the Hon. Ivor Montagu, to whose interest in small mammals the donation of the specimens is mainly due.

5. *Paraxerus flavivittis mossambicus*, subsp. n.♀. 202. Lumbo, 1st September, 1918. *Type.*

Median dorsal area a mixture of blackish and buffy, which

results in a general colour something between "olive-brown" and "*Chaetura* drab," therefore very different from the "ferrugineus" and "rostbraun" of Peters's description of *flavivittis*. Under surface white, with a faint tinge of buffy on the belly; the hairs white to their bases; line of demarcation on sides not sharply defined. Colour of lateral light stripes practically white or ivory-colour, not "flavidus" or "hell-gelb" as in true *flavivittis*. Dark line below them like the middle back above them. Top of muzzle grizzled ochraceous. Crown and nape dark grey, without buffy or fulvous intermixture. Facial lines well defined, alternately dark brown and white. Shoulders ochraceous, the withers between them also more tinged with this colour than the main dorsal area. Ears whitish buffy. Front of fore limbs and top of hands ochraceous; inner side of limb whitish. Outer side of hips greyish buffy, top of hind feet strong buffy. Tail-hairs ringed with black and pale buffy, their tips broadly buffy, those of the terminal hairs stronger buffy; middle line of under surface ochraceous.

Skull apparently as in *flavivittis*, though the nasals are considerably broader behind than in Peters's figure.

Dimensions of the type (measured in flesh):—

Head and body 175 mm.; tail 175; hind foot 40; ear 18.

Skull: greatest length 41; condylo-incisive length 37; zygomatic breadth 24; nasals, length 12·3, posterior breadth 7·5; upper tooth-series 8.

Hab. and *type* as above.

In his description of *P. flavivittis* Peters mentioned two localities for the species—Mossimboa, on the coast, about 11° S., and Cabaceira, near Mozambique,—the second being almost exactly the present locality. But the differences in colour from his description and figure shown by Mr. Loveridge's specimen are so material that there are evidently two subspecies of the animal, and it is obvious that the first-named place—Mossimboa—should be taken as the type-locality.

Judging by a specimen from still further north which has been hitherto taken as *P. flavivittis*, the back of that animal is probably a strong fulvous ochraceous, very different from the dark brownish of *P. f. mossambicus*.

This specimen is a peculiarly welcome accession to the Museum collections, as *P. flavivittis* was one of the only two species which I was not able to allocate to their restricted genera when dividing the African squirrels in 1909*.

* Ann. & Mag. Nat. Hist. (8) iii. p. 475 (1909).

Mr. Loveridge's example now shows that it is unquestionably a typical *Paraxerus*.

Within that genus it renders verbally incorrect my statement, when describing *Tamiscus**, that the species of *Paraxerus*, as there restricted, were "of uniform colour, or at most with an indistinct whitish line down each side of the back," for the light lines of *P. flavivittis* are exceedingly conspicuous, and anything but indistinct. But none the less the striping is quite unlike that in the black-striped *Tamiscus*, and is only an intensification of the indistinct whitish lines referred to.

6. *Taterona* sp.

♂. 199.

Not determinable on a single specimen.

7. *Steatomys loveridgei*, sp. n.

♂. 201. 1st October, 1918. *Type*.

A small pale-coloured species with slender teeth.

Hairs of back little over 6 mm. in length. Colour very much paler than in other species, the dorsal area near wood-brown, the tips of the hairs pale avellaneous. Sides markedly paler, the hairs with a whitish zone below the pale avellaneous tips. Underside pure sharply defined white. Crown like back; cheeks lighter, like flanks. Ears large, a distinct white patch behind and below their posterior base. Fore limbs wholly white. Hind limbs white, with a narrow line of the flank colour running down to the ankle. Tail white, slightly darkened on the upper surface by the presence of a few barely perceptible blackish hairs; its end quite white.

Skull, as compared with that of *S. pratensis*, much smaller, narrower, and with very small brain-case. Molars decidedly smaller and more slender.

Dimensions of the type:—

Head and body 77 mm.; tail 35; hind foot 15; ear 18.

Skull: greatest length 22·5; condylo-incisive length 20·3; zygomatic breadth 10·5; nasals 9; interorbital breadth 3·6; breadth of brain-case 10; palatilar length 10; palatal foramina 5·2; upper molar series 3·4; breadth of m^1 1·1.

This little "fat-mouse" is much smaller than *S. pratensis*, and is probably most nearly allied to the *S. minutus* of Angola. But its molars are more slender than in the latter, with the anterior lamina of m^1 more elongate, and externally

* Ann. & Mag. Nat. Hist. (9) i. p. 33 (1918).

it is distinguishable by its paler colour, larger ears, and practically white tail.

In naming it after Mr. Loveridge I wish to bear testimony to the enthusiasm which resulted in the preparation of a small mammal collection during the difficulties incidental to a trying campaign.

8. *Grammomys* sp.

♂. 198.

This specimen has unfortunately lost its bullæ, so that its determination is doubtful; but it is probably referable to *G. surdaster*, Thos. & Wr.

V.—*A List of the Freshwater Fishes of Sierra Leone.* By G. A. BOULENGER, F.R.S.

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WHEN describing some new fishes discovered by Mr. N. W. Thomas in these 'Annals' in 1915 (ser. 8, vol. xv. p. 202), I observed that the exploration of the freshwater fauna of Sierra Leone had not received much attention, and that the number of species of fishes with which I was then acquainted amounted only to eighteen. Thanks to further collections made shortly after by Mr. Thomas and quite recently by Mr. A. F. Wingate, the number has now risen to fifty-eight, and it is of interest to give a list of all the species which can now be recorded:—

Polypteridæ.

Polypterus palmas, Ayres.

Lepidosirenidæ.

Protopterus annectens, Ow.

Mormyridæ.

Petrocephalus simus, Sauv.

Isichthys henryi, Gill.

Marcusenius brachistius, Gill.

Gnathonemus mento, Blgr.

— *thomasi*, Blgr.